

BSC 307 5-E Model Lesson Plan Form

Title: "Man Without a Stomach"	Grade Level: 9
Objectives: TSWBAT... Describe the function of the organs of the digestive system, including the oral cavity, esophagus, stomach, small intestine, large intestine, colon, and anus. Describe the function of the accessory organs of the digestive system, including the liver, pancreas, and gallbladder. Identify where carbohydrates, proteins, and lipids are chemically and mechanically digested in the digestive system, including the enzymes involved. Analyze the symptoms of given digestive disorders and determine the cause.	
Illinois Learning Standards: Stage I 12 A 1: Apply scientific inquiries or technological designs to explain metabolic processes within cells and between organisms and their environment, explaining gas exchange, food processing, transport, excretion, locomotion, body regulation, and nervous control, investigating enzyme actions in various reactions, or describing the applications of the polar nature of water and the pH index in biochemical reactions.	
Engagement: Students watch a 4 ½ minute video about Jonas, a man who attempted to commit suicide by swallowing bleach. In doing so, Jonas lost many of the organs of his digestive system, including his stomach. Jonas undergoes a radical procedure, in which his intestine is connected to his esophagus. Students are then asked to generate questions they have about Jonas's situation.	
Exploration: Students are partnered up and work through a series of questions about the digestive system (based on Jonas' situation) with the assistance of their textbooks. Students choose 2 questions from the prior brainstorming to answer in addition to the questions the teacher handed out.	

Explanation:

The class goes over their findings, with the teacher facilitating the discussion and correcting misconceptions as necessary. Students share the answers to the questions that they chose. Teacher has a supplemental power point to help illustrate some of the concepts being discussed. Students have a diagram of the digestive system that they can use to write in important details as the discussion commences.

Extension:

Students are given a set of scenarios, including different disorders of the digestive system, digestion of organic compounds, etc. Students apply their knowledge of the digestive system to these scenarios to figure out what is going on.

Evaluation(Assessment Strategies):

Evaluation will be based on the students' answers in the discussion during the "explanation" phase and the students' answers on the worksheet in the "extension" phase.

Rationale:

Instead of lecturing over the digestive system and then showing a video, this lesson uses a video clip to provide a scenario of interest, through which students are motivated to figure out what is going on in this man's system. In doing so, they learn about the structure and function of the digestive system. This lesson relates to ILS Stage I 12 A 1 in that it explores the world of food processing and how food gets broken down into a form in which it can be used by cells for energy.

Resources:

Illinois State Board of Education. (1997). Illinois State Learning Standards. [Online]. Retrieved on August 14, 2008. Available: <http://www.isbe.net/ils/Default.htm>.